

Communicable Diseases Communiqué

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Update– Novel influenza A/H1N1 Global Outbreak

The Global situation

As of 7 May 2009, WHO has received 2 371 official reports of novel influenza A/H1N1 infection globally. The majority of these are from Mexico which has reported 1 112 laboratory-confirmed cases including 42 deaths. The United States of America (USA) has reported 896 laboratory-confirmed cases including two deaths. Cases have also been reported from Austria (n=1), Canada (n=201), China, Hong Kong Special Administrative Region (n=1), Colombia (n=1), Costa Rica (n=1), Denmark (n=1), El Salvador (n=2), France (n=5), Germany (n=10), Guatemala (n=1), Ireland (n=1), Israel (n=6), Italy (n=5), Netherlands (n=2), New Zealand (n=5), Poland (n=1), Portugal (n=1), Republic of Korea (n=3), Spain (n=81), Sweden (n=1), Switzerland (n=1) and the United Kingdom (n=32). There have been no reported deaths from these countries.

Preliminary data from the three most affected countries to date - Mexico, USA and Canada suggest that the majority of cases have experienced a mild influenza-like illness (ILI) and have recovered without complications. Severe illness has been reported from Mexico and the USA. The two deaths in the USA occurred individuals who were at risk for severe influenza. In Mexico, data on deaths is incomplete but hospitalized cases had severe respiratory disease including secondary bacterial pneumonia in some cases.

The novel influenza A/H1N1 virus

This virus is a novel strain of influenza A/H1N1 and therefore distinct from seasonal influenza A/H1N1 which is expected to circulate annually during the influenza season in South Africa. The novel virus has been termed a “quadruple recombinant” and has genetic elements of swine influenza, avian and human influenza A viruses. Available data suggest the virus is easily transmitted person to person and current estimates for secondary attack rates range

from 22% to 30%. The virus remains susceptible to oseltamivir and zanamivir (see “use of antivirals” below).

Fortunately, laboratory studies to date have not identified any of the markers of human virulence detected in both the 1918 pandemic virus or the more recent avian influenza A/H5N1 viruses.

Situation update South Africa

As of 7 May 2009 there have been no laboratory-confirmed cases of novel influenza A/H1N1 in South Africa. Four cases meeting the suspected case definition have been tested. Tests for novel influenza A/H1N1 infection were negative in all four cases. Two of these cases, from the Free State and Gauteng provinces respectively, were confirmed to have infection with seasonal influenza H3N2.

The WHO National Influenza Centre at the NICD is currently providing testing for all suspected cases of novel influenza A/H1N1 for South Africa and as required for the African continent. Testing includes an initial real-time PCR for influenza A and B followed by sub-typing of influenza A for all positive samples. The current suspected case definition remains as follows:

An individual with recent onset of fever $\geq 38^{\circ}\text{C}$ **PLUS ONE OR MORE** of the following acute symptoms (sore throat, rhinorrhoea/nasal congestion, cough or myalgia) **AND** gives one of the following histories:

- Travel within **7 days** prior to onset of symptoms to Mexico or other countries with confirmed community-wide outbreaks*.
- Close contact** with an individual who is a suspected/confirmed case of swine influenza A/H1N1 in the 7 days prior to onset of symptoms

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*For updates on countries currently reporting confirmed human cases of swine influenza A/H1N1 visit: <http://www.who.int/csr/disease/swineflu/en/index.html>

**Close contact includes: having cared for, lived in the same household with, or had direct contact within 2 metres of a suspected or confirmed case of novel influenza A/H1N1 infection.

Only individuals meeting this case definition should be tested for novel influenza A/H1N1 influenza as per NICD interim guidelines. A throat and nasal swabs in viral transport medium are the specimen of choice and should be sent to NICD as follows:

For urgent attention: Dhamari Naidoo: National Influenza Unit, National Institute for Communicable Diseases (NICD), 1 Modderfontein Road, Sandringham Johannesburg

Use of antivirals

Available data for the current novel influenza A/H1N1 virus suggest it remains sensitive (susceptible) to the neuraminidase inhibitor antiviral medications zanamivir and oseltamivir. It is resistant to the adamantane antiviral medications, amantadine and rimantadine. Recommendations for use of antivirals may change as data on antiviral susceptibilities become available. Currently oseltamivir (Tamiflu®) and zanamivir (Relenza®) are the antiviral agents of choice for treatment when indicated. Use of antiviral agents should be limited to persons with confirmed or suspected infection due to novel influenza A/H1N1 with the following indications:

- Hospitalised Individuals with moderate or severe influenza-related illness.
- Any individual at high risk for serious complications of influenza and in whom treatment can be commenced within 2 days of onset of illness.

See: "NICD interim guidelines for use of antivirals" for details:<http://www.nicd.ac.za/pubs/communique/2009/sitrep/Guidelines.htm>

Antiviral prophylaxis

Use of oseltamivir or zanamivir for post-exposure prophylaxis should only be offered to high risk close contacts of confirmed or suspected cases of infection due to novel influenza A/H1N1.

See: "NICD interim guidelines for use of antivirals" for details:<http://www.nicd.ac.za/pubs/communique/2009/sitrep/Guidelines.htm>

Recommendations for travellers

As per WHO recommendations, South Africa has not issued any specific travel restrictions. People are advised not to travel if they are ill and to seek medical care if they become ill on their return from travelling. For those travelling internationally and who are at high risk for severe influenza, travelling with a "standby" course of oseltamivir (Tamiflu®) or zanamivir (Relenza®) is recommended. This can be used in the event of exposure to a case of influenza and/or in the case of infection under the guidance of a medical practitioner. High risk individuals include the following:

- All persons over the age of 65 years;
- Persons (adults or children) with underlying medical conditions and who are receiving regular medical care for conditions such as chronic pulmonary disease (including asthma) and cardiac disease (excluding hypertension), chronic renal and hepatic diseases, diabetes mellitus and similar metabolic disorders
- Individuals who are immunosuppressed (including HIV infected persons and persons on immunosuppressive medications);
- Adults and children who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions
- Children and adolescents who are receiving long-term aspirin therapy and who might be at risk for experiencing Reye's syndrome after influenza virus infection;
- Residents of nursing homes and other chronic-care facilities
- Pregnant women

Strategies for prevention of infection in South Africa

Available data suggests the current seasonal influenza vaccine will offer limited, if any, protection from novel influenza A/H1N1 infection.

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However, individuals in whom seasonal influenza vaccine is routinely recommended should ensure they have been immunised in preparation for the South Africa influenza season. WHO has initiated consultations with vaccine manufacturers worldwide to facilitate the availability of all necessary material to start production of novel influenza A/H1N1 vaccine. It is expected that the first vaccines may be available within 5 to 6 months.

Implementation of good respiratory hygiene measures and behaviour modification to reduce the risk of infection and transmission remains the most effective means of prevention currently. This includes:

- Frequent hand washing with soap and water (or an alcohol-based hand sanitiser

if hands are not visibly soiled).

- Covering your nose and mouth with a tissue when coughing or sneezing. Disposal of used tissues in a dustbin.
- Avoiding overcrowded areas and keeping at least a two metre distance from individuals with respiratory symptoms.
- Staying at home if you have an acute febrile respiratory illness.

References:

1. WHO: http://www.who.int/csr/disease/swineflu/guidance/health_professionals/en/index.html. Accessed 8 May 2009
2. Centers for Disease Control and Prevention: <http://www.cdc.gov/h1n1flu/>. Accessed 28 April 2009

Seasonal Influenza

To date (8 May), 343 specimens have been received for respiratory virus isolation. The majority (270) were from the active Viral Watch surveillance programme. In the first 10 weeks of the year an average of 9 specimens per week were received, which increased to an average of 3 over the past 7 weeks. Ten influenza isolates were made during the month of March, all except one from active surveillance sites. These isolates were further identified as influenza A H3N2 (7) and influenza B (3).

Since week 17 (week starting 27 April), a further 6 influenza A isolates have been made, five have

been identified as influenza A H3N2, and one is awaiting typing.

Increased surveillance may have resulted in earlier than usual detection of seasonal influenza, which on average over the past 25 years has started at the beginning of June. It is critical, however, to decrease the impact of seasonal influenza, particularly in persons with co-morbid disease. Seasonal influenza vaccine should therefore be given as soon as possible to those at risk for influenza related complications.

Source: Epidemiology Division, Respiratory Virus Unit and Viral Diagnostics Units, NICD

Table: Number of seasonal influenza isolates by province, South Africa, 2009

Province	Influenza				Total
	A (awaiting typing)	A/H1N1 (seasonal)	A/H3N2	B	
Eastern Cape	0	0	0	0	0
Free State	0	0	1	0	1
Gauteng	0	0	3	2	5
KwaZulu-Natal	0	0	4	1	5
Limpopo	1	0	0	0	1
Mpumalanga	0	0	0	0	0
Northern Cape	0	0	0	0	0
North West	0	0	0	0	0
Western Cape	0	0	3	0	3
Total	1	0	11	3	15

This communiqué is published by the National Institute for Communicable Diseases (NICD) on a monthly basis for the purpose of providing up-to-date information on communicable diseases in South Africa. Much of the information is therefore preliminary and should not be cited or utilised for publication.

